REMARKS

INTRODUCTION

In accordance with the foregoing, claims 1 and 8 have been amended. Claims 2, 9 and 11-15 have been cancelled. Claims 1, 3-8, 10 and 16-24 are pending and under consideration.

CLAIM REJECTIONS – 112

Claims 14 and 15 were rejected under 35 USC 112, second paragraph, as being indefinite. Claims 14 and 15 have been cancelled. Withdrawal of the foregoing rejection is requested.

CLAIM REJECTIONS – 102 and 103

Claims 1-3 and 16-21 were rejected under 35 USC 102(b) as being anticipated by Shimizu et al. (US 4,804,913) (hereinafter "Shimizu").

Claims 4-7 and 22-24 were rejected under 35 USC 103(a) as being unpatentable over Shimizu in view of Mukai et al. (JP 2000-111307) (hereinafter "Mukai").

Claims 8-15 were rejected under 35 USC 103(a) as being unpatentable over Schwarz et al. (WO 01/48379) (hereinafter "Schwarz") in view of Shimizu.

Claims 1-7

Amended claim 1 recites: "...wherein the core has a length shorter than one half of the length of the first sensor coil and the second sensor coil in series." Support for this amendment may be found in at least original claim 2. The Office Action relies on 6:10-6:11 of Shimuzu which discusses that the length of each coil is substantially equal to the length of each magnetic ring 21b to show this feature of claim 1. However, the core discussed in Shimizu includes a plurality of magnetic rings 21b and a plurality of spacers 21c. Accordingly, if the magnetic rings 21b needed for the four phase arrangement of Shimizu were added together, the magnetic rings 21b (corresponding to the core of claim 1) would have a longer length than the coil length. By contrast, claim 1 recites that the core has a length shorter than one half of the length of the first sensor coil and the second sensor coil in series.

This technical feature of claim 1 allows the linear compressor to compensate for external environmental factors such as temperature and pressure.

Claim 2 has been cancelled. Claims 3-7 are dependent on claim 1 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

Claims 8-10

Amended claim 8 recites: "...forming a length of the core to be shorter than a half of length of the first sensor coil and the second sensor coil connected in series." Support for this amendment may be found in at least original claim 9. The Office Action relies on 6:10-6:11 of Shimuzu which discusses that the length of each coil is substantially equal to the length of each magnetic ring 21b to show this feature of claim 8. However, the core discussed in Shimizu includes a plurality of magnetic rings 21b and a plurality of spacers 21c. Accordingly, if the magnetic rings 21b needed for the four phase arrangement of Shimizu were added together, the magnetic rings 21b (corresponding to the core of claim 8) would have a longer length than the coil length. By contrast, claim 8 recites forming a length of the core to be shorter than a half of length of the first sensor coil and the second sensor coil connected in series. Further, this deficiency in Shimizu is not cured by Schwarz.

This technical feature of claim 8 allows the linear compressor to compensate for external environmental factors such as temperature and pressure.

Claim 9 has been cancelled. Claim 10 is dependent on claim 8 and is therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

Claims 11-15

Claims 11-15 have been cancelled.

Claims 16-24

Claim 16 recites: "...a core attached to a piston disposed coaxially in the aperture of the bobbin, wherein the core is less than one half the length of the sensor coil..." The Office Action relies on 6:10-6:11 of Shimuzu which discusses that the length of each coil is substantially equal to the length of each magnetic ring 21b to show this feature of claim 16. However, the core discussed in Shimizu includes a plurality of magnetic rings 21b and a plurality of spacers 21c. Accordingly, if the magnetic rings 21b needed for the four phase arrangement of Shimizu were

added together, the magnetic rings 21b (corresponding to the core of claim 16) would have a longer length than the coil length. By contrast, claim 16 recites that the core is less than one half the length of the sensor coil.

This technical feature of claim 16 allows the linear compressor to compensate for external environmental factors such as temperature and pressure.

Claims 17-24 are dependent on claim 16 and are therefore believed to be allowable for at least the foregoing reasons.

Withdrawal of the foregoing rejection is requested.

PROVISIONAL REJECTIONS -- DOUBLE PATENTING

Claims 1 and 2 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1 of co-pending Application No. 10/822,686 in view of Schwarz.

Claim 4 was provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 4 of co-pending Application No. 10/822,686 in view of Schwarz.

Claim 5 was provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 5 of co-pending Application No. 10/822,686 in view of Schwarz.

Claim 11 was provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 12 of co-pending Application No. 10/822,686.

Claims 16-20 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 6 of co-pending Application No. 10/822,686 in view of Shimizu.

Claims 1 and 4 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims 4 and 8 of co-pending Application No. 11/030,434 in view of Shimizu.

As the above double patenting rejections are provisional, it is respectfully requested they be held in abeyance until the present application is otherwise in a condition for allowance.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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